

THE OFFICIAL NEWSLETTER OF THE LOS ANGELES COUNTY FIRE DEPARTMENT EMERGENCY MEDICAL SERVICES PROGRAM

YOU MAKE THE CALL

CPR Really Matters

The construction site on Motz street in Paramount was busy with activity as workers poured concrete in the early morning hours on March 2, 2005. There was an abrupt halt to the operation as the concrete truck "pouring boom" struck a power line. When the dust settled, two young men lay on the ground and a call was placed to 9-1-1 for assistance.

Engine and Squad 31 arrived on-scene five minutes after the dispatch to find two workers performing excellent CPR on one patient and the other co-workers tending to the second patient who was unconscious. A second paramedic unit (Squad 98) was dispatched to treat the second patient. The incident Captain divided up the resources to allow the paramedics and two firefighters to assume care for the first patient who was in cardiac arrest, while the Engineer cared for the second patient who was now awake.

Treatment for the young man in cardiac arrest began with the two firefighters assuming CPR from the co-workers. The paramedics went to work defibrillating the patient who was in ventricular fibrillation and placement of an endotracheal tube. An intravenous line was established and epinephrine was administered. The patient's cardiac rhythm converted to a sinus rhythm with pulses. A bolus of lidocaine was given post-conversion. The patient began moving his arms during transport. The 31-year old man walked out of the hospital three days later with some memory loss, but otherwise without neurological sequelae.

The treatment for the patients' on this call was the same high-quality care that we as members of the County of Los Angeles Fire Department provide on every response. So why was there a different outcome than on most medical cardiac Arrests? CPR really matters!



CPR Demonstrated by EMS Student Workers, P. Hillman, and M. White. (Left) EMS Response by FF Pradin, and FFS Brenard.



The County of Los Angeles Fire Department is pleased to announce our participation in a public/private partnership with the City of Los Angeles Departments of Aging, Police and Fire, the Los Angeles County Sheriff's Department, Department of Community and Senior Services and the Department of Mental Health, in bringing the File of Life (FOL) program to seniors in Los Angeles County. This project was made possible through the generous support of PacifiCare's Secure Horizons Medicare Advantage Plans.

The FOL, which is offered free to persons 60 years and older as part of this partnership, is designed to provide information to emergency personnel in case of a medical emergency. This is especially important for seniors living alone, who drive alone or who have special medical needs.

The FOL provides vital medical information in an easy to access format. Seniors participating in the program will receive a FOL packet that includes a red plastic magnetic holder meant to be placed on the refrigerator, a wallet size FOL to carry at all times or to place in the car glove box, and two stickers that may be placed in the front window at home and car window or glove box to alert first responders.

The FOL Medical Information Sheets, which are placed in the red plastic refrigerator and wallet pouches, include information about medications, allergies, medical problems, blood type, emergency contact persons,

physician's name, preferred hospital and any other pertinent conditions. When properly completed and updated, the FOL allows emergency personnel to quickly and efficiently access vital medical information that may be potentially life saving and which might not otherwise be available during an emergency.

It is important that the information contained in the FOL is kept up to date. Therefore, it is recommended that the Medical Information Sheets be completed with a pencil. Whenever there is a change in medication(s) or dosage, seniors must be sure to update their cards. It may be helpful to ask a trusted friend or relative for assistance when filling out the information.

The County of Los Angeles Fire Department currently has a limited supply of the FOL packets. Therefore, a pilot program in various areas of the County served by the Department, and with concentrated senior populations will be targeted for initial distribution of the packets. Based on the success of the program, it is anticipated that additional packets may be obtained in the future for broader distribution Department wide to seniors and others who may have special medical needs. In the interim, the FOL packets are also available at Multi-purpose Senior Centers throughout the City and County of Los Angeles. For additional information or copies of the medical form, visit: www.lacity.org/doa/pdf/FileofLife.pdf.

The ability of a patient to survive a critical illness or injury is greatly influenced by timely and appropriate emergency care. This fact becomes exceedingly apparent when the patient is an infant or child. Although they have the ability to compensate well for short periods, pediatric patients often decompensate physiologically more rapidly than adults. This edition of the "You Make The Call" focuses on pediatrics; that segment of the population that generates a relatively small percentage of EMS calls, while simultaneously accentuating every minute of the run; and which once again prompts the question: how would you make the call?

Lights were out early in the station when the tones sounded just after 11:00 pm. As personnel rolled out of their bunks, dispatch announced to the engine and squad company: "pediatric difficulty breathing". As the units turned the final corner, the location of the home was highlighted by the two police units out front with their lights on. The paramedics were met at the door of the home by a frantic man stating "please hurry, its...it's my baby daughter....they're upstairs, please hurry!" Bounding up the stairs and into the well lit master bedroom, the crews found an emotional woman talking with one sheriff's deputy, while the second deputy sheriff was holding a baby.

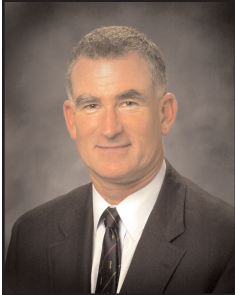
As the paramedic stepped toward the deputy sheriff with the baby, he instantly began speaking. "We found the mother next to the crib coaxing the baby to stay awake" he said. "She said the baby's lips had turned blue...and when I checked, they were ok. So I picked her up....and her eyes opened!" As one of the paramedics took the infant from the arms of the deputy sheriff, he looked back at his partner and said, "I'm going to focus on the baby; get me as much info as you can, ok?" "Copy that," said the other paramedic. The crew instantly dispersed throughout the room creating a flurry of sounds and activity. The paramedic who was gathering information from the parents, the captain with the deputies, and the engine paramedic assisted the paramedic responsible for patient care..

"How old is your baby?" asked the paramedic assigned to gather information. "10 weeks" answered the father. "Has this type of event ever happened before?" "No, never!" said the mother frantically, "Has she been ill lately?" "No....she's been a little off on feeding today....but nothing like this". "Its ok ma'am," he said, "when was the last time you saw your baby acting normal?" "Just a few hours ago" she said.. "I put her down for a nap and I went to check on her 10 minutes ago... and she looked blue...I rubbed her foot and her eyes opened...but she didn't move....something's wrong...I just know it!" ...the husband added, "that's when I called 911."

The paramedic gathering information continued to question the parents about the event, the pregnancy and delivery of the child, as well as significant medical history, allergies and medications, with no irregularities noted.

The paramedic providing patient care had taken the baby and laid her on the bed. He was impressed by the general listlessness of the infant, and noted her pale color and cool extremities. The engine paramedic had set up an oxygen mask for blow-by use and was opening the medical box for his partner. Both were working diligently to obtain an initial assessment on the infant.

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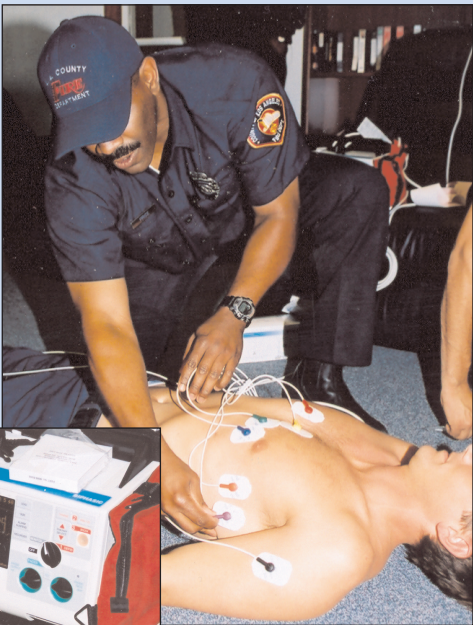
DocTalk

FROM MEDICAL DIRECTOR
FRANKLIN D. PRATT, M.D.

The Department's 12-lead ECG program is gaining momentum that is unprecedented. Hundreds of our paramedics have been trained to use the equipment.

These same paramedics have completed Advanced Cardiac Life Support (ACLS) training and are now certified in ACLS. Every week, there are more patients who have an acute heart attack diagnosed in the field and are quickly transported and treated with the most current therapy. Their lives are saved or severe disability is prevented.

Despite these victories, there are still impediments to unqualified success. Some of us feel that getting a patient to the cardiac cath lab 30- 45 minutes faster is not worth the extra 2-5 minutes we spend in the field. Because of our effort, the patient's heart has blood flow 25-40 minutes more quickly. The sick heart doesn't know how the time was spent and by whom. The sick heart doesn't care-- blood flow is blood flow. Blood flow is what we want and what the heart needs. There are still doctors and



nurses working in emergency rooms who doubt the benefits of

paramedics using 12-lead ECGs in the field. If you are one of the doubters, I ask you to review the medical publications on this topic. Paramedics can... quickly and accurately determine if someone is having an acute heart attack in the field. Their evaluation gets patients to your door after you know that this patient has ECG evidence of an acute heart attack. This helps you move more quickly to provide the best patient care. Your actions help save lives and reduce disability. If you are a doctor or a nurse working in the ER, use this technology to help your decision making and get your patient the care they need, more quickly. You will know you did your very best to give an acutely ill patient the best care possible. Your experience will confirm the benefits of this technology and the paramedics who use the technology.

Additional medical articles support the benefit of the earliest possible diagnosis of acute heart attack and treatment to save lives and heart muscle. A June 23, 2005 article in the New England Journal of Medicine showed that each decrease of five percentage points in the left ventricular ejection fraction was associated with a 21% adjusted increase in the risk of sudden death or cardiac arrest with resuscitation. In other words, a small reduction in heart muscle strength from injury after heart attack causes a very large increase in death the first month after the heart attack. Our use of the 12-lead in the field helps minimize this heart muscle injury. Now that heart disease is the leading cause of line-of-duty deaths in the North American fire service, it is just a matter of time before we save one of our own using our 12-lead ECG devices.

Thank you for your continued support of the 12-lead program. We will overcome the obstacles to full implementation and acceptance. We will be proud of the increased quality of care we deliver to the residents of Los Angeles County.

YOU MAKE THE CALL

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“Capillary refill is delayed” the paramedic providing patient care advised his partner, as he unbuttoned the baby’s top. “She wants to go to sleep on me too.” He stimulated the infant’s leg as he pulled his stethoscope out of the box. “Stay awake” he said. The patient care paramedic leaned forward and focused on obtaining an apical pulse. He was intently listening when an astonished look appeared upon his face. “I need quiet please” yelled the paramedic as he simultaneously began stimulating the infant; “I need quiet!!” Stunned at the shout, all eyes in the room converged on the paramedic attending to the infant, as the room fell into an eerie silence. The baby, equally stunned, opened her eyes responding to both the shout and the physical stimulation. The paramedic squeezed the earpieces into his ears to filter out noise and once again listened for a pulse. The pulse was at first difficult to assess due to its rapid rate, but suddenly and dramatically slowed once again from a normal rate to a pronounced bradycardic rate. Simultaneously, the baby’s muscle tone became limp and the once pink to slightly pale skins deteriorated to an obvious pallor with cyanotic lips. The paramedic instantly jumped to his feet as he put all of his immediate findings together.....and here once again the question is asked: how would... YOU MAKE THE CALL?

Acute Life Threatening Event.....ALTE! Every prehospital care provider has heard the term, and every paramedic as part of their training, has memorized the signs and symptoms with which to define it. But most importantly, everyone knows the extreme nature of such an event. The Los Angeles County Prehospital Care Policy Manual, Reference No. 510, Pediatric Patient Destination, defines ALTE as:

“An episode characterized by a combination of apnea, color change (usually cyanosis, but occasionally erythematic), marked change in muscle tone (usually limpness), and choking or gagging.”

These terrifying events once termed “aborted crib death” and “near-miss SIDS”, have generated tremendous concern and research in the medical community. It has been written that approximately 50% of all reported ALTE cases have an identifiable medical or surgical cause for the event which includes: infection, gastrointestinal disorder, seizure, airway abnormalities, neurological disorders, cardiac arrhythmias, as well as impaired regulation of breathing. The challenge for the prehospital care provider lies in furnishing the receiving hospital physician with the most complete patient assessment possible, in order for accurate recognition, diagnosis, and treatment to be initiated.

An important step in the assessment process is questioning the caregiver witnessing the event. The patient’s history should be investigated for evidence of similar previous events, abnormal breathing patterns, seizures, and other medical problems. Suggested questions asked about the patient should also include:

- Durationfrom witnessed onset
- Colorcyanosis, pale, erythema
- Respiratory Effortapnea, obstructed, irregular
- Sleep Stateawake, asleep
- Positionprone, supine, upright
- Noisesstridor, choking
- Eye Movement.....closed, startled, rolled, fluttering
- Relationship to Feedingfluid in the mouth
- Need for Interventionvigorous stimulation, CPR (by caregivers)

By taking appropriate steps during these anxious calls to ensure a complete assessment, the paramedics can provide a detailed picture for the mobile intensive care nurse (MICN) responding to the base hospital call and the emergency department physician and nurses to comprehensively evaluate their received patient.

So what’s your call? Although all would agree on the urgency of the run, not everyone would have spent the additional moments to immediately obtain the necessary history. In this case, the paramedic who contacted the base hospital “painted an accurate picture” to the MICN of a “witnessed ALTE patient having reoccurring periods of apnea, bradycardia, cyanosis, and limp muscle tone.” The report had been so complete, the MICN informed the paramedics that it was “textbook” and he at first questioned it. Afterwards, he praised and congratulated the paramedics on providing an excellent run for an educational tape review to assist other paramedics in caring for this type of patient!

So the next time the MDT describes: “difficulty breathing - pediatrics“, recall this slide from your carousel to assist you in “Making the Call!”